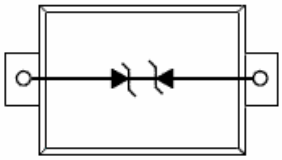
Transient Voltage Suppressors for ESD Protection

FEATURES:

- Ultra Low Capacitance 0.5 pF
- Low Clamping Voltage
- Small Body Outline Dimensions:
  0.039″ x 0.024″ (1.00 mm x 0.60 mm)
- Low Body Height: 0.016″ (0.4 mm)
- Stand−off Voltage: 5 V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000−4−2 Level 4 ESD Protection

Circuit Diagram & Pin Configuration:

SOD-923



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
TESDL051BD92	N	8000/Tape&Reel

MAXIMUM RATINGS

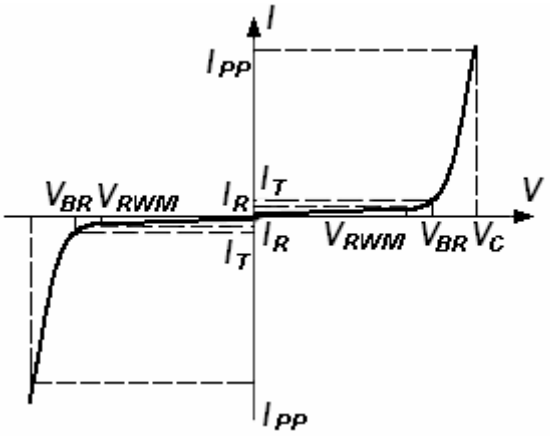
Rating	Symbol	Value	Unit
IEC61000-4-2 Contact Air		±10	KV
Total Power Dissipation on FR-5 Board (Note 1)@ Ta=25 °C	P_D	150	mV
Storage Temperature Range	T_{stg}	-55 to +150	°C
Junction Temperature Range	T_J	-55 to +125	°C
Lead Solder Temperature-Maximum (10 Second Duration)	T_L	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only.Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR–5 = 1.0 x 0.75 x 0.062 in.

Electrical Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Device	V_{RWM} (V) Max	I_{R1}(uA) @ V_{RWM} Max	V_{BR} (V)@ I_T (Note 1) Min	I_T mA	V_C (V)@ I_{PP}=1A Max	I_{PP} (A)* Max	P_{PK} (W)* Max	C (pF) Typ
TESDL051BD92	5.0	1.0	5.4	1.0	12.9	3	40	0.9

*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25℃.

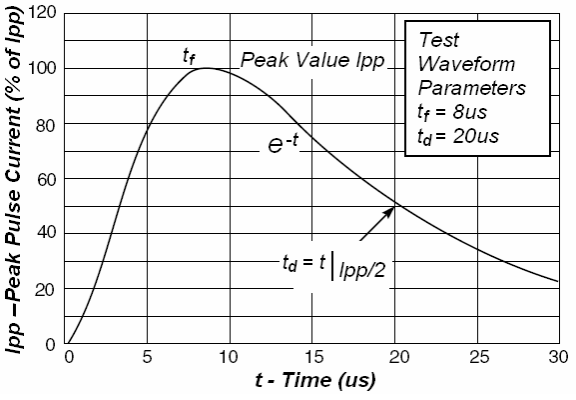


Fig1. Pulse Waveform

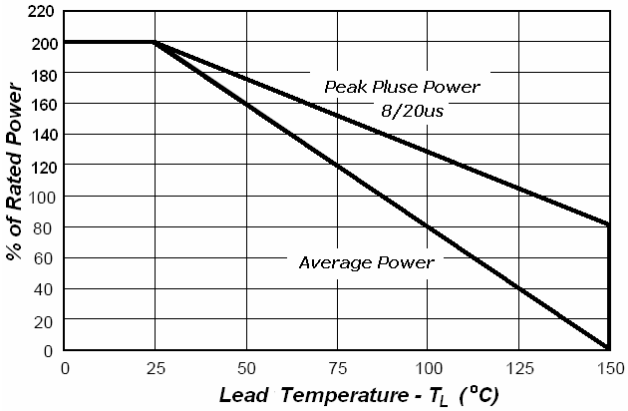


Fig2.Power Derating Curve

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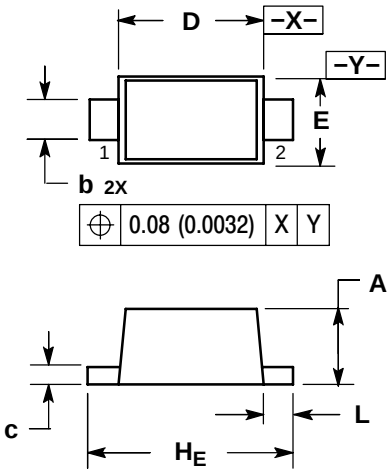
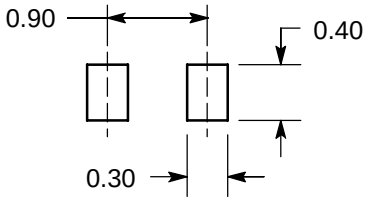


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

NOTICE

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